

APPLICANT(S): COHEN, Eytan et al.
SERIAL NO.: 10/811,863
FILED: March 30, 2004
Page 2

AMENDMENTS TO THE CLAIMS

Please amend the claims to read as follows.

The listing of the claims will replace all prior versions, and listing of claims in the application:

Listing of the Claims

1. (Currently Amended) A microwave ~~radiation~~ curable ink for piezo electric drop-on-demand inkjet printing, comprising:
 - a. molecules of material capable of undergoing a polymerization reaction under the influence of said microwave radiation ~~generated heat~~;
 - b. a microwave radiation absorber, said absorber enhances ~~enhanceing~~ absorption of microwave radiation and conversion of said radiation energy into heat;
 - c. a thermal initiator, said initiator being activated by heat generated by said microwave radiation ~~energy~~; and
 - d. a colorant~~[[,]]~~ and
 - e. additives.
2. (Currently Amended) A ~~microwave radiation curable~~ The ink for piezo electric drop-on-demand inkjet printing according to claim 1, ~~and where~~ wherein said molecules of material capable of undergoing a polymerization reaction under the influence of said microwave radiation ~~generated heat~~ are any one or a combination of acrylic monomers, and acrylic oligomers~~[[,]]~~ or any combination thereof.
3. (Currently Amended) A ~~microwave radiation curable~~ The ink for piezo electric drop-on-demand inkjet printing according to claim 1, ~~and where~~ wherein said microwave radiation absorber is at least one of carbon black, minerals~~[[,]]~~ and polar molecules, ~~said such as alcohols, amines, ammonium salts and conductive polymers.~~
4. (Currently Amended) A ~~microwave radiation curable~~ The ink for piezo electric drop-on-demand inkjet printing according to claim 1, ~~and where~~ wherein said thermal initiator is at

APPLICANT(S): COHEN, Eytan et al.
SERIAL NO.: 10/811,863
FILED: March 30, 2004
Page 3

least one of lauroyl peroxide, cumenn peroxide dicumyl peroxide, tert-amyl peroxy-benzoate, dentanedione-peroxide, and 1,1'-azobis-cyclohexane carbonitrile.

5. (Currently Amended) ~~A microwave radiation curable~~ The ink for piezo electric drop-on-demand inkjet printing according to claim 1 ~~and where said~~ further comprising one or more additives, said additives are ~~are any one or a combination of~~ wetting agents, dispersants, rheology modifiers, solvents, and or defoamers.

6. (Currently Amended) A method of microwave ~~radiation~~ curing of ink for piezo drop-on-demand ink jet printing comprising ~~steps of~~:

- a. providing an ink, said ink having a microwave absorber and a thermal initiator, said absorber enhancing absorption of microwave radiation;
- b. printing with said ink an image bearing pattern on a substrate; and
- c. irradiating by microwave ~~curing~~ radiation said printed image bearing pattern, ~~wherein such that~~ said image bearing pattern is cured by heat generated by ~~application of said microwave curing radiation converted into heat within the ink layer.~~

7. (Currently Amended) A method of printing on an optically reflective substrate surfaces by piezo drop-on-demand ink jet printing comprising ~~steps of~~:

- a. providing an ink, said ink having a microwave absorber and a thermal initiator, said absorber enhancing absorption of microwave radiation;
- b. printing with said ink an image bearing pattern on said optically reflecting substrate; and
- c. irradiating by microwave ~~curing~~ radiation said printed image bearing pattern, ~~wherein such that~~ said image bearing pattern is cured by heat generated by ~~application of said microwave curing radiation converted into heat within the ink layer~~ and said microwave radiation is not reflected by the substrate.

8. (Currently Amended) An ink jet ink composition comprising:

- a. molecules capable of undergoing polymerization reaction under microwave radiation;

APPLICANT(S): COHEN, Eytan et al.
SERIAL NO.: 10/811,863
FILED: March 30, 2004
Page 4

- b. at least one colorant; and
 - c. one or more additives Additives.
9. (Currently Amended) ~~The An-ink-jet~~ ink according to claim 8, where said molecules ~~capable of undergoing a polymerization reaction~~ are monomers and oligomers containing acrylate groups.
10. (Original) An ink jet ink according to claim 8, where said additives are selected from a group of thermal initiators, microwave radiation absorbers, wetting agents, dispersants, rheology modifiers, solvents, and defoamers.
11. (Currently Amended) ~~The An-ink-jet~~ ink according to claim 8, further comprising thermal initiators, where said thermal initiators are ~~selected from~~ lauroyl peroxide, cumenn peroxide dicumyl peroxide, tert-amyl peroxy-benzoate, dentanedione-peroxide, or 1,1'-azobis-cyclohexane carbonitrile.
12. (Currently Amended) An ink jet ink according to claim 8, further comprising microwave absorbers, where said microwave absorbers are selected from components capable of increasing the absorption of microwave radiation, said components being: carbon black, minerals[[,]] ~~polar molecules alcohols, amines, ammonium salts and conductive polymers~~.
13. (New) The ink according to claim 3, wherein said polar molecules are, alcohols, amines, ammonium salts or conductive polymers.
14. (New) The ink according to claim 12, wherein said polar molecules are, alcohols, amines, ammonium salts or conductive polymers.
15. (New) The method according to claim 7, wherein printing on said optically reflecting substrate comprises printing on a glass surface, a plastic surface or a marble surface.